

20080201.ba v04_n141.bam.20080201

>From ???@??? Thu Jan 31 18:00:50 2008 -0600
Date: Fri, 1 Feb 2008 00:00:12 GMT
From: Old Tube Radios <boatanchors@theporch.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: BOATANCHORS digest 4141
Message-Id: <20080201000013.DEF194701CC@srvr1.theporch.com>

BOATANCHORS Digest 4141

Topics covered in this issue include:

- 1) Re: Electrolytic reforming question
by WA5CAB@cs.com
- 2) Re: Electrolytic reforming question
by spr@earthlink.net
- 3) Unknown tuner ID query
by scb@hiwaay.net
- 4) Re: Electrolytic reforming question
by "JAMES HANLON" <knjhanlon@msn.com>
- 5) Re: Electrolytic reforming question
by "Arden Allen" <gumbear@pacbell.net>
- 6) Re: Electrolytic reforming question
by WA1KBQ@aol.com
- 7) Re: Electrolytic reforming question
by stuck in 50s <polepeeg@aa4rm.ba-watch.org>
- 8) RE: Electrolytic reforming question
by AB Bonds <ab@vuse.vanderbilt.edu>
- 9) RE: Electrolytic reforming question
by "Nick England" <nick@3rdtech.com>
- 10) Re: Electrolytic reforming question
by wb3fau@att.net
- 11) Re: Electrolytic reforming question
by "David Stinson" <arc5@ix.netcom.com>
- 12) Correction: Getting Those Ferrying Command Radios OTA.
by "David Stinson" <arc5@ix.netcom.com>
- 13) Re: Electrolytic reforming question
by WA5CAB@cs.com
- 14) ZM11B/U Manual
by RICHARD SOLOMON <w1ksq@q.com>
- 15) Re: Electrolytic reforming question
by Richard Post <postr@ohiou.edu>
- 16) 1950's QST CD-ROM
by Niel Wiegand <nielwiegand@aggienetwork.com>

From: WA5CAB@cs.com

Message-ID: <cea.281cfaf2.34d2446e@cs.com>
Date: Wed, 30 Jan 2008 16:21:50 EST
Subject: Re: Electrolytic reforming question
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: multipart/alternative;
boundary="part1_cea.281cfaf2.34d2446e_boundary"

--part1_cea.281cfaf2.34d2446e_boundary
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

Ralph,

I concur with Al, as long as it's your set and not one someone else is paying you to fix. If the leakage at rated voltage is as low as you said, the caps will probably be OK for a long time, especially if you light off periodically and don't let it (the capacitor) sit again for 30 years. And if you add the fuse you mentioned, you're safe against taking out the power transformer.

As an alternative to restuffing, AES has a number of different multi-section upright can types available. They aren't cheap, and you'll also need to buy the clamp separately which AES doesn't always tell you. But then time and the re-stuffing capacitors aren't cheap, either. However, the complete replacements they have are mostly black in color, so won't look like the originals which is sometimes important.

In a message dated 1/30/2008 2:46:50 PM Central Standard Time,
anchor@ec.rr.com writes:

> Hi 'Cousin' Ralph,
> Nice to chat with you on CX, your Valiant sounded fine. I didn't hear a
> problem with your NC-303 ;-) I found that my Invader 2000 got good
> response from CQ's, my Valiant did OK too. Qualified 5 rigs, a high for me,
>
> thanks to planning ahead. I had to change out the electrolytic in my 2-B as
> it didn't know the music when I checked it out Sat. (it just hummed).
> I've gotten to be suspicious of old NOS electrolytics since I've found
> it's not too hard to restuff them properly. But I've left old ones in a few
>
> things, notably SP-600's, as their originals rarely test bad for me, but
> only if it's mine. If I'm working on somebody else's stuff I don't do that.
>
> If it's mine and it goes, I can recognize & fix it, if it's somebody else's
> he might not realize it's going bad, and would have to get it back to me to
> fix. And hopefully no damage done, except to my pride in workmanship.
> I've reformed some, had mixed success. "They" say that the electrolyte

> can dry out over the yrs, even if not used. Some have even injected
> distilled water, I haven't tried.
> Your mileage may vary.
> Hope to see you on fone CX in 2 wks
> 73,
> Al, W8UT
> New Bern, NC
> www.boatanchors.org
> www.hammarlund.info
>
> ----- Original Message -----
> From: "Ralph Parker" <rparker@dccnet.com>
> To: "Old Tube Radios" <boatanchors@theporch.com>
> Sent: Wednesday, January 30, 2008 3:16 PM
> Subject: Electrolytic reforming question
>
>
> >I limped through the last CX with a sort-of working NC-303, and thought I'd
> >best take it out of the cabinet and have a look. A PO had sloppily
> >installed four tubular electrolytics to replace the 4-in-1 can. Time to
> >return it to more-or-less original.
> >
> >I have a couple of NOS cans that are probably 30 years old, either of
> >which
> >would do the trick (40-40-40/450). I put one on my Heath IT-28 for
> >reforming, in series with a VOM to watch the current. All sections came up
> >nice, with a final leakage current of less than 1ma @ 450v for each
> >section.
> >
> >The question: can I confidently install this without worry, or should I
> >wait for new caps to arrive and rebuild the original can?
> >
> >I have previously put a 250ma fuse in the CT of the HV winding to save the
> >xformer, just in case. I'll do that with the '303 too.
> >Then I'll attend to the other issues - poor AGC, audio distortion, etc.
>

Robert Downs - Houston
<<http://www.wa5cab.com>> (Web Store)
MVPA 9480
<wa5cab@cs.com> (Primary email)
<wa5cab@comcast.net> (Backup email)

--part1_cea.281cfaf2.34d2446e_boundary
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

* * * * *
* ---REMAINDER OF MESSAGE TRUNCATED--- *
* This post contains a forbidden message format *
* (such as an attached file, a v-card, HTML formatting) *
* Mail Lists at theporch.com only accept PLAIN TEXT *
* If your postings display this message your mail program *
* is not set to send PLAIN TEXT ONLY and needs adjusting *
* * * * *

--part1_cea.281cfaf2.34d2446e_boundary--

Message-ID: <11681296.1201729947187.JavaMail.root@elwamui-sweet.atl.sa.earthlink.net>

Date: Wed, 30 Jan 2008 16:52:26 -0500 (EST)

From: spr@earthlink.net

To: Old Tube Radios <boatanchors@theporch.com>

Subject: Re: Electrolytic reforming question

Mime-Version: 1.0

Content-Type: text/plain; charset=UTF-8

Content-Transfer-Encoding: 7bit

Hi Ralph,

In my experience, that capacitor is good to use; I wouldn't expect any trouble with it.

/scott

-----Original Message-----

>From: Ralph Parker <rparker@dccnet.com>

>Sent: Jan 30, 2008 3:16 PM

>To: Old Tube Radios <boatanchors@theporch.com>

>Subject: Electrolytic reforming question

>

>I limped through the last CX with a sort-of working NC-303, and thought I'd

>best take it out of the cabinet and have a look. A PO had sloppily

>installed four tubular electrolytics to replace the 4-in-1 can. Time to

>return it to more-or-less original.

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>would do the trick (40-40-40/450). I put one on my Heath IT-28 for

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>The question: can I confidently install this without worry, or should I

>wait for new caps to arrive and rebuild the original can?

>

>I have previously put a 250ma fuse in the CT of the HV winding to save the
>xformer, just in case. I'll do that with the '303 too.
>Then I'll attend to the other issues - poor AGC, audio distortion, etc.
>
>VE7XF
>
>

To: Old Tube Radios <boatanchors@theporch.com>
Subject: Unknown tuner ID query
Message-ID: <1201730691.47a0f4833f143@webmail.hiwaay.net>
Date: Wed, 30 Jan 2008 16:04:51 -0600 (CST)
From: scb@hiwaay.net
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 8bit

Still seeking ID for item in question.

Have some addl info of interest to the Gp.

A vintage totally passive synchro-switching AM detector using a space-charge
6SK7;

<http://members.wideband.net.au/gzimmer/XtalSets/NoBatt/upe7.jpg>

More on this concept, carried forward, if interested;

<http://members.wideband.net.au/gzimmer/XtalSets/Detectors/FET1.html>

Re-run of query;

Anyone have any idea what the tuner in my homebrew project rig is from? Had it
kicking around the J.B. for years looking for a worthy app.

<http://theradioboard.com/pix/steveb5.jpg>

<http://theradioboard.com/pix/steveb6.jpg>

FWIW; The rig is a totally passive BCB reciever adapted from the January 2007
QST article HIGH SENSITIVITY CRYSTAL SET by Bob Culter, N7FKI. It uses a zero-
bias FET pair as a self-synchronous switching detector. Clever and very
effective

Thnx in advance; Steve B.

Message-ID: <BAY110-DAV4553F97AFE8DA73C277C1A0360@phx.gbl>
From: "JAMES HANLON" <knjhanlon@msn.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Electrolytic reforming question
Date: Wed, 30 Jan 2008 16:05:11 -0700
MIME-Version: 1.0

Content-Type: multipart/alternative;
boundary="-----_NextPart_000_009A_01C86359.E4B670E0"

This is a multi-part message in MIME format.

-----=_NextPart_000_009A_01C86359.E4B670E0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable

Ralph,

It was good to work you on both 20 and 40. Thanks a lot for the QSO's.

If your reformed caps read OK as far as both leakage and capacitance, I =
see no reason why you shouldn't install them, especially if you put that =
fuse in the center tap. My 303 is still running on its original =
filters, so your replacement couldn't be any worse than that.

73,

Jim, W8KGI

-----=_NextPart_000_009A_01C86359.E4B670E0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

```
* * * * *
*      ---REMAINDER OF MESSAGE TRUNCATED---      *
*      This post contains a forbidden message format      *
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* * * * *
```

-----=_NextPart_000_009A_01C86359.E4B670E0--

Message-ID: <003a01c863dc\$a6c480f0\$279f480c@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Electrolytic reforming question
Date: Wed, 30 Jan 2008 23:41:03 -0800
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

The truth is hard to bear and that's why capacitor manufacturers have been obsequiesce on the subject. Aluminum electrolytic capacitors are like tires. They wear out with use. Old capacitors are like old tires. If the tire's rubber formula has good antioxidation properties the tire will have a long shelf life. Electrolytic capacitors that are well sealed and have a stable chemistry will have a long shelf life although entropy will cause deformation of the aluminum oxide dielectric layer over time. Reformation of such capacitors is desirable and occurs to a high degree when properly done within an hour or two. Worn out capacitors are rife with corruption as the porous paper separator has deteriorated, contaminating the chemistry, and no longer reliably performs its supportive function. Reforming them is futile. The shelf life limitation reported by manufacturers is all about the life span of the dielectric formation in an unused capacitor. I regularly repair stuff made in the 50's with good original electrolytics. The stuff with bad caps also show a long operational life, most tubes replaced, well cooked resistors, lots of electrostatically collected grunge, and some previous repair work.

Arden Allen
KB6NAX

From: WA1KBQ@aol.com
Message-ID: <bd7.2622eda4.34d30c19@aol.com>
Date: Thu, 31 Jan 2008 06:33:45 EST
Subject: Re: Electrolytic reforming question
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

I'd use it, should be fine. I agree with the others if you were recapping for someone else I would install a new one but based upon the results of your test I wouldn't do it for one I intend to keep. I only have a couple that have been recapped, the ones I use all the time. All the rest are kept original for historical reasons and when I want to get one down that is still original and check it for signs of life I do it with careful observation and by monitoring B+ behavior. Too many here to recap everything, besides if top performance is the goal any BA can be beat by modern equipment anyway. The only advantages a piece of old equipment has is nostalgic appearance and possibly sound quality. Everybody will agree a 1947 something or other with a 10KC wide 455 IF and push-pull audio will be a joy to listen to but you won't want it for pile-ups.

73, Greg

-----Original Message-----

>From: Ralph Parker <rparker@dccnet.com>

>Sent: Jan 30, 2008 3:16 PM

>To: Old Tube Radios <boatanchors@theporch.com>

>Subject: Electrolytic reforming question

>

>I limped through the last CX with a sort-of working NC-303, and thought I'd
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>would do the trick (40-40-40/450). I put one on my Heath IT-28 for
>reforming, in series with a VOM to watch the current. All sections came up
>nicely, with a final leakage current of less than 1ma @ 450v for each
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>wait for new caps to arrive and rebuild the original can?

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>xformer, just in case. I'll do that with the '303 too.

>Then I'll attend to the other issues - poor AGC, audio distortion, etc.

>

>VE7XF

>

>

*****Start the year off right. Easy ways to stay in shape.
<http://body.aol.com/fitness/winter-exercise?NCID=aolcmp00300000002489>

Date: Thu, 31 Jan 2008 08:14:09 -0500 (EST)

From: stuck in 50s <polepeeg@aaa4rm.ba-watch.org>

Message-Id: <200801311314.m0VDE9SK009342@fracas.netboobie.org>

To: Old Tube Radios <boatanchors@theporch.com>

Subject: Re: Electrolytic reforming question

Hiya Ralph. I like most would use the trip-40/450 so carefully
treated on Heath

Arden came thru with tales of that reminded me of Beaker on the
Muppets. Probably all OK

But noone mentioned lost capacity during storage. It happens.

I short-cut cap measurement bu just installing a reformed cap & see if set hums. If so, cud be two things

- a. lost C
- b. excessive I drawn somewhere else in ckt. (filter C can't keep V up in sine-wave rect-out valleys)

I go at sets this way. lift any B+ bleeder ckt.s off gnd & WITH SET UNPOWERED, source set's B+ line with current-limited supply. Say 500vdc thru 20K w-w. Then look for usual suspects. Screen bypasses or inter-audio couplers.

Hence the process is a two-fer. Electrolytic reform and leaky cap detection

Ask what time it is & lesen results in watch-making

Marty, aka AA4RM

Content-class: urn:content-classes:message
MIME-Version: 1.0
Content-Type: text/plain; charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable
Subject: RE: Electrolytic reforming question
Date: Thu, 31 Jan 2008 08:47:44 -0600
Message-ID: <C2E12B15D2CA56409ED5354B2AA78B0D02E704AC@eecsmail.eecs.local>
From: AB Bonds <ab@vuse.vanderbilt.edu>
To: Old Tube Radios <boatanchors@theporch.com>

Well, yes and no. I re-formed the filters on an NC-240 and it worked= well for about ten hours of operation. Then one day I turned it on and= they catastrophically shorted.

If you are going to try to run on crappy caps, use a fuse fer sher, and= don't expect them to last.

A. B. Bonds

> -----Original Message-----
> From: owner-boatanchors@theporch.com
> [mailto:owner-boatanchors@theporch.com]On Behalf Of JAMES HANLON
> Sent: Wednesday, January 30, 2008 5:05 PM
> To: Old Tube Radios
> Subject: Re: Electrolytic reforming question

>=20
>=20
> Ralph,
>=20
> It was good to work you on both 20 and 40. Thanks a lot for=20
> the QSO's.
>=20
> If your reformed caps read OK as far as both leakage and=20
> capacitance, I see no reason why you shouldn't install them,=20
> especially if you put that fuse in the center tap. My 303 is=20
> still running on its original filters, so your replacement=20
> couldn't be any worse than that.
>=20
> 73,
>=20
> Jim, W8KGI
>=20

Date: Thu, 31 Jan 2008 10:34:32 -0500
From: "Nick England" <nick@3rdtech.com>
Subject: RE: Electrolytic reforming question
To: Old Tube Radios <boatanchors@theporch.com>
Message-id: <005001c8641e\$c6d95ef0\$fd0212ac@Heathkit2>
MIME-version: 1.0
Content-type: text/plain; charset=us-ascii
Content-transfer-encoding: 7bit

I reform caps from a HV supply through a current-limiting resistor like Marty says. After I think it has reformed OK, I'll discharge the cap through the resistor and time 67% drop - that's one RC time constant so I then have a quick check that capacitance is up to snuff. I use 50K resistor and time 450->150v or 300->100v so procedure is simple & I have a little chart scribbled in my workbench notebook for 8uf, 20uf, 40uf.

cheers,
Nick KD4CPL
www.virhistory.com/navy

-----Original Message-----
From: owner-boatanchors@theporch.com [mailto:owner-boatanchors@theporch.com]
On Behalf Of stuck in 50s
Sent: Thursday, January 31, 2008 8:14 AM
To: Old Tube Radios
Subject: Re: Electrolytic reforming question

Hiya Ralph. I like most would use the trip-40/450 so carefully treated on Heath

Arden came thru with tales of that reminded me of Beaker on the Muppets. Probably all OK

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I short-cut cap measurement bu just installing a reformed cap & see if set hums. If so, cud be two things

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- b. excessive I drawn somewhere else in ckt. (filter C can't keep V up in sine-wave rect-out valleys)

I go at sets this way. lift any B+ bleeder ckt.s off gnd & WITH SET UNPOWERED, source set's B+ line with current-limited supply. Say 500vdc thru 20K w-w. Then look for usual suspects. Screen bypasses or inter-audio couplers.

Hence the process is a two-fer. Electrolytic reform and leaky cap detection

Ask what time it is & lesen results in watch-making

Marty, aka AA4RM

From: wb3fau@att.net
To: Old Tube Radios <boatanchors@theporch.com>
Cc: Ralph Parker <rparker@dccnet.com>
Subject: Re: Electrolytic reforming question
Date: Thu, 31 Jan 2008 15:48:35 +0000
Message-Id:
<013120081548.5097.47A1EDD30008C003000013E922243651029B0A02D29B9B0EBF9A0E00CC0D99@att.net>

You have to decide how reliable the 300 has to be. I have had several, no failure of these original caps. I did have a choke open up. Check those bleeder resistors, they often go open. The line fuse should protect the transformer, assuming someone has not replaced the original with a 10amp fuse! Great old radio- enjoy it...Russ.

Message-ID: <001e01c86423\$f6cad4e0\$6401a8c0@boudreaux>
From: "David Stinson" <arc5@ix.netcom.com>

To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Electrolytic reforming question
Date: Thu, 31 Jan 2008 10:11:37 -0600
MIME-Version: 1.0
Content-Type: text/plain;
 format=flowed;
 charset="iso-8859-1";
 reply-type=original
Content-Transfer-Encoding: 7bit

If you can get your hands on a ZM-11 test set,
it's the best thing going for reforming and testing caps.
Bubba gives it five Bear Cans.

Message-ID: <004301c86424\$9ce283f0\$6401a8c0@boudreaux>
From: "David Stinson" <arc5@ix.netcom.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Correction: Getting Those Ferrying Command Radios OTA.
Date: Thu, 31 Jan 2008 10:16:13 -0600
MIME-Version: 1.0
Content-Type: text/plain;
 format=flowed;
 charset="iso-8859-1";
 reply-type=response
Content-Transfer-Encoding: 7bit

In the diagram, C6 is 470 pF, not .01.
Sorry 'bout 'dat.

From: WA5CAB@cs.com
Message-ID: <ce8.25db3374.34d35e92@cs.com>
Date: Thu, 31 Jan 2008 12:25:38 EST
Subject: Re: Electrolytic reforming question
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: multipart/alternative;
boundary="part1_ce8.25db3374.34d35e92_boundary"

--part1_ce8.25db3374.34d35e92_boundary
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

ZM-3/U or ZM-3A/U are also quite effective. Their DC supply goes to 600 VDC.
Its only bad feature is that the leakage test switch is spring return. But
a few minutes with a pair of long nostril pliers fixes this reversibly.

In a message dated 1/31/2008 10:12:54 AM Central Standard Time,
arc5@ix.netcom.com writes:

> If you can get your hands on a ZM-11 test set,
> it's the best thing going for reforming and testing caps.
> Bubba gives it five Bear Cans.

Robert Downs - Houston
<<http://www.wa5cab.com>> (Web Store)
MVPA 9480
<wa5cab@cs.com> (Primary email)
<wa5cab@comcast.net> (Backup email)

--part1_ce8.25db3374.34d35e92_boundary
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

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* * * * *
*      ---REMAINDER OF MESSAGE TRUNCATED---      *
*      This post contains a forbidden message format      *
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*      is not set to send PLAIN TEXT ONLY and needs adjusting *
* * * * *
```

--part1_ce8.25db3374.34d35e92_boundary--

Message-ID: <BAY130-W1343E17C0FE65727EBE765E0370@phx.gbl>
Content-Type: multipart/alternative;
boundary="_ba5a7c60-a04f-4a7e-9695-6d4a678569f6_"
From: RICHARD SOLOMON <w1ksz@q.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: ZM11B/U Manual
Date: Thu, 31 Jan 2008 18:17:11 +0000
MIME-Version: 1.0

--_ba5a7c60-a04f-4a7e-9695-6d4a678569f6_
Content-Type: text/plain; charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable

Does anyone know of a source for a pdf copy of the manual ?=20
=20
Thanks, Dick, W1KSZ=

--_ba5a7c60-a04f-4a7e-9695-6d4a678569f6_

Content-Type: text/plain; charset=us-ascii
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```
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*      This post contains a forbidden message format      *
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* * * * *
```

--_ba5a7c60-a04f-4a7e-9695-6d4a678569f6_--

Mime-Version: 1.0
Message-Id: <p05210600c3c7d6d7ac38@[192.168.2.2]>
Date: Thu, 31 Jan 2008 12:04:38 -0800
To: Old Tube Radios <boatanchors@theporch.com>
From: Richard Post <postr@ohiou.edu>
Subject: Re: Electrolytic reforming question
Content-Type: text/plain; charset="us-ascii" ; format="flowed"

Don't know what a ZM-3 is. If anything like my Sencore Z Meter 2, it's a great piece of equipment. Nice digital readout, has the spring return for the leakage test. Puts a low ohms resistor across the cap leakage terminals to keep the user from getting zapped by the cap after test. Also comes with an adjustable foot to temporarily defeat that spring return. (using the handle as the back support for the foot.) Foot can be used for reforming caps.

Comes with a chart of maximum allowable leakage for various electrolytics. PDF copy on my website:

<http://oak.cats.ohiou.edu/~postr/bapix/MaxCLeak.pdf>

Also great for checking PIV for silicon (using the cap microamperes leakage test). Check those Chinese 1N4007's. You'd be surprised at the actual PIV.

Rich KB8TAD

Boatanchor pix

<<http://tinyurl.com/hexco>>

At 12:25 PM -0500 1/31/08, WA5CAB@cs.com wrote:

>ZM-3/U or ZM-3A/U are also quite effective. Their DC supply goes to 600 VDC.

> Its only bad feature is that the leakage test switch is spring return. But
>a few minutes with a pair of long nostril pliers fixes this reversibly.

>

>In a message dated 1/31/2008 10:12:54 AM Central Standard Time,

>arc5@ix.netcom.com writes:

>> If you can get your hands on a ZM-11 test set,

>> it's the best thing going for reforming and testing caps.

>> Bubba gives it five Bear Cans.

>

>Robert Downs - Houston

><<http://www.wa5cab.com>> (Web Store)

>MVPA 9480

><wa5cab@cs.com> (Primary email)

><wa5cab@comcast.net> (Backup email)

>

Message-ID: <47A246B9.6010200@aggienetwork.com>

Date: Thu, 31 Jan 2008 16:07:53 -0600

From: Niel Wiegand <nielwiegand@aggienetwork.com>

MIME-Version: 1.0

To: Old Tube Radios <boatanchors@theporch.com>

Subject: 1950's QST CD-ROM

Content-Type: text/plain; charset=us-ascii; format=flowed

Content-Transfer-Encoding: 7bit

I'm looking for a set of QST CD-ROMs for the 1950's. ARRL no longer
sells them.

Does anyone have a 1950's set they will sell me or let me borrow for a
couple of days?

73,

Niel - W0VLZ

End of BOATANCHORS Digest 4141
